

Claims

What is claimed is:

- 1 1. A fiber optic transceiver array for short wave fiber optic
2 communications comprising:
3 a series of fiber optic transceiver channels; each fiber optic
4 transceiver channel including a plurality of test pads;
5 a power distribution bypass capacitor distributed along said series of
6 fiber optic transceiver channels;
7 a plurality of high voltage power supply and ground connections
8 coupled through said power distribution bypass capacitor and distributed
9 around said series of fiber optic transceiver channels;
10 a threaded high voltage power supply connection extending to
11 alternating ones of said series of fiber optic transceiver channels.
- 1 2. A fiber optic transceiver array for short wave fiber optic
2 communications as recited in claim 1 includes a threaded ground connection
3 extending to alternating other ones of said series of fiber optic transceiver
4 channels, said alternating other ones of said series of fiber optic transceiver
5 channels not including said threaded high voltage power supply connection.
- 1 3. A fiber optic transceiver array for short wave fiber optic
2 communications as recited in claim 1 wherein said plurality of test pads of
3 each fiber optic transceiver channel includes a ground connection and a pair
4 of differential output connections.
- 1 4. A fiber optic transceiver array for short wave fiber optic
2 communications as recited in claim 3 wherein said threaded high voltage
3 power supply connection extending to alternating ones of said series of fiber
4 optic transceiver channels includes said threaded high voltage power supply
5 connection extending between said ground connection and one of said pair
6 of differential output connections.

1 5. A fiber optic transceiver array for short wave fiber optic
2 communications as recited in claim 3 includes a threaded ground connection
3 extending to alternating other ones of said series of fiber optic transceiver
4 channels to provide alternating low impedance ground and low impedance
5 high voltage power supply channels in said series of fiber optic transceiver
6 channels.

1 6. A fiber optic transceiver array for short wave fiber optic
2 communications as recited in claim 1 wherein each said fiber optic
3 transceiver channel includes a channel decoupling capacitor positioned
4 proximate to said pair of differential output connections.

1 7. A fiber optic transceiver array for short wave fiber optic
2 communications as recited in claim 1 wherein said each said fiber optic
3 transceiver channel includes a photodetector and said series of fiber optic
4 transceiver channels have a predefined spacing between sequential ones of
5 said photodetectors.

1 8. A fiber optic transceiver channel for short wave fiber optic
2 communications comprising:
3 at least a pair of high voltage power supply and ground connections;
4 a plurality of test pads including at least a ground connection and a
5 pair of differential output connections; and
6 a channel decoupling capacitor positioned proximate to said pair of
7 differential output connections.

1 9. A fiber optic transceiver channel for short wave fiber optic
2 communications as recited in claim 8 wherein said pair of high voltage power
3 supply and ground connections includes a low impedance ground
4 connection coupled through a power distribution bypass capacitor.

1 10. A fiber optic transceiver channel for short wave fiber optic
2 communications as recited in claim 8 wherein said pair of high voltage power
3 supply and ground connections includes a low impedance high voltage
4 power supply connection coupled through a power distribution bypass
5 capacitor.

1 11. A fiber optic transceiver channel for short wave fiber optic
2 communications as recited in claim 8 includes a photodetector.

1 12. A fiber optic transceiver channel for short wave fiber optic
2 communications as recited in claim 8 includes an output buffer circuitry
3 coupled to said differential output connections.

1 13. A fiber optic transceiver channel for short wave fiber optic
2 communications as recited in claim 12 wherein said output buffer circuitry
3 includes an input stage including a differential pair of transistors.

1 14. A fiber optic transceiver channel for short wave fiber optic
2 communications as recited in claim 13 wherein said differential pair includes
3 a differential pair of high gain metal semiconductor field effect transistors
4 (MESFETs).

1 15. A fiber optic transceiver channel for short wave fiber optic
2 communications as recited in claim 13 includes a first source follower
3 transistor pair coupled to said differential pair of transistors.

1 16. A fiber optic transceiver channel for short wave fiber optic
2 communications as recited in claim 15 includes a second source follower
3 transistor pair coupled to said first source follower transistor pair.

1 17. A fiber optic transceiver channel for short wave fiber optic
2 communications as recited in claim 16 wherein said second source follower
3 pair is connected to said differential output connections.

1 18. A fiber optic transceiver channel for short wave fiber optic
2 communications as recited in claim 16 wherein said first and second source
3 follower pairs provide unity gain.